

REMARKS

In this Amendment, Applicant has cancelled Claims 3, without prejudice or disclaimer, and has amended Claims 1 – 2 and 4 – 16. Claim 1 has been amended to specify an embodiment of the invention. In addition, Claims 1 – 2 and 4 – 16 have been amended to delete numerals and rephrase certain expressions. The amendment of Claims 2 and 4 – 16 is editorial in nature. It is respectfully submitted that no new matter has been introduced by the amended claims. All claims are now present for examination and favorable reconsideration is respectfully requested in view of the preceding amendments and the following comments.

REJECTIONS UNDER 35 U.S.C. § 102 (b):

Claims 1 – 2, 6 – 11 and 15 have been rejected under 35 U.S.C. § 102 (b) as allegedly being anticipated by Shoemaker et al. (US 5,363,114), hereinafter Shoemaker.

It is respectfully submitted that in view of presently claimed invention, the rejection has been overcome. In particular, Claim 1 has been amended to require that the conductive radiating structure have a total length of $\lambda/4$ at a frequency in the frequency band to be received and/or transmitted by the antenna. As recognized by the Examiner, the prior art does not teach or suggest that the conductive radiating structure having a total length of $\lambda/4$ at a frequency in the frequency band to be received and/or transmitted by the antenna. In addition, rejections to Claims 2, 6 – 11 and 15 have been overcome due to their dependency on Claim 1.

Accordingly, withdrawal of the rejection under 35 U.S.C. § 102 first paragraph is respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 103:

Claims 4 – 5, 12 – 14 and 16 have been rejected under 35 U.S.C. § 103, as allegedly being obvious and unpatentable over Shoemaker.

It is respectfully submitted that in view of presently claimed invention, the rejection has been overcome. In particular, Claim 1 has been amended to require that the conductive radiating structure have a total length of $\lambda/4$ at a frequency in the frequency band to be received and/or transmitted by the antenna. As recognized by the Examiner, the prior art does not teach or suggest that the conductive radiating structure having a total length of $\lambda/4$ at a frequency in the frequency band to be received and/or transmitted by the antenna.

In addition, there are significant differences between the embodiments of the present invention as claimed and the disclosure in Shoemaker. Shoemaker discloses a planar serpentine antenna. The disclosed antennas in the embodiment of the present invention are meander shaped for the purpose of saving space by changing the mechanical extension of the antenna. Another advantage of the antennas of the present invention is that they can be made to resonate across a very wide range from about 1MHz to 3GHz to be able to cover a field of application as wide as possible. It is well known for one of ordinary skill in the art that an increased bandwidth leads to impaired antenna performance gain. The antenna solution as disclosed in Shoemaker is not especially well suited to be used in mobile telephony where the antenna both has to transmit and receive signals. It is furthermore well known for one of ordinary skill in the art that an antenna of the type as disclosed in Shoemaker requires a reference ground plane to work properly. The greatest length of the ground conductor 25 and 26 as disclosed in Shoemaker is directly proportional to the tuning frequency of the intended frequency band, thus limiting the tuning frequency range.

Another important difference is that the antenna means according to the present invention has a first end (12) which is connected capacitively and galvanically to ground, and a second end (14) which is connected to a feeding line. The antenna disclosed in

Shoemaker has a feed end and an open end. However, there is no disclosure or suggestion that the open end is connected to ground.

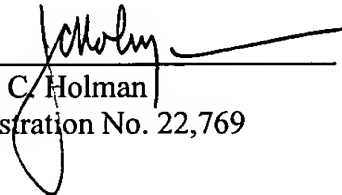
Therefore, there is no motivation or suggestion in Shoemaker or other prior art to modify Shoemaker to disclose the present invention as presently claimed in Claims 4 – 5, 12 – 14 and 16. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. §103 be withdrawn.

Having overcome all outstanding grounds of rejection, the application is now in condition for allowance, and prompt action toward that end is respectfully solicited.

Respectfully submitted,

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